ABSTRACT

ISOLATION AND IDENTIFICATION OF BACTERIA PRODUCING FIBRINOLYTIC ENZYME FROM SEA CUCUMBER *(Paracaudina australis)*

Shofiatur Rosyidah

Paracaudina australis is one of sea cucumber species that is distributed in Indonesia, specifically on Kenjeran Beach Surabaya. Sea cucumber contains bioactivity which can be used as traditional medicines, and it has developed in Asian countries. Sea cucumber is also rich in nutrition, so it can be categorized as food sources. The aim of this research is to identify fibrinolytic producing bacteria of Paracaudina australis. Firstly, bacteria have been isolated from sea cucumbers (*Paracaudina australis*). In this research, there were two tests done, namely proteolytic activity test and fibrinolytic activity test. The first test was proteolytic activity test by using skim milk agar assay. The positive result was indicated by clear zone around the colony. The bacteria which gave proteolytic activity could be used on the next test namely fibrinolytic activity test by using fibrin plate media. TS 6.4 bacteria which produced biggest clear zone were selected. Bacterial isolate TS 6.4 was identified 16S rRNA and phylogenetic tree. From the identification result, it was suspected that TS 6.4 was *Pseudomonas aeruginosa*.

Keywords: Fibrinolytic enzyme, Fibrinolytic activity, *Paracaudina australis*, Identification, *Pseudomonas aeruginosa.*